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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,432	12/31/2001	Volker Von Drach	VOND3002/REF	3103

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/926,432

Applicant(s)

DRACH ET AL.

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on RCE filed on 11/28/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 17-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 28, 2003 has been entered.
2. Applicant's amendment and accompanying remarks filed November 28, 2003 have been acknowledged.
3. Examiner acknowledges amended claims 1, 4-5, 7-8, 10, 12, 17 and 20.
4. The objection to claims 1, 4-5, 7-8, 10 and 12 has been withdrawn due to applicant's amended claims.
5. The rejection of claims 4 and 5 under 35 U.S.C. 112, second paragraph has been withdrawn due to applicant's amended claims 4 and 5.
6. The rejection of claims 1-5, 11, 13 and 17-18 under 35 U.S.C. 103(a) as being unpatentable over Ikuta, U.S. Patent Number 5,290,627 is withdrawn due to applicant's argument.
7. The rejection of claims 1, 6-8 and 19-20 under 35 U.S.C. 103(a) as being unpatentable over Ikuta, U.S. Patent Number 5,290,627 in view of Kolla et al., U.S. Patent Number 6,133,348 is withdrawn due to applicant's argument.

8. The rejection of claims 1, 9-10 and 12 under 35 U.S.C. 103(a) as being unpatentable over Ikuta et al., U.S. Patent Number 5,290,627 in view of Holinski, U.S. Patent Number 4,663,060 is withdrawn due to applicant's argument.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-2, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908.

Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claims 1-2 and 17 (see column 1, lines 5-11 and column 3, lines 30-33). Additionally, the Galati reference discloses that the highly fibrillated fibers form a large surface area, which is suitable for use in reinforcing friction materials as per instant claim 11 (see abstract and column 4, lines 50-65). The Galati reference does not specifically disclose the fibril fraction as per instant claims 1 and 17. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA

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1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties.

11. Claims 1, 3-5, 13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908 in view of Foster, U.S. Patent Number 5,240,766. Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claims 1 and 17 (see column 1, lines 5-11 and column 3, lines 30-33). Additionally, the Galati reference does not specifically disclose the fibril fraction as per instant claims 1 and 17. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The Galati reference does not disclose the mixture of reinforcing fibers and aramid fibers and the amount of the vegetable fibers as per instant claim 3. Foster teaches a gasket material that includes a fiber component that is

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constructed from a fibrillated fiber as per instant claim 13 (see column 2, lines 35-56).

Additionally, Foster teaches that the fiber component can be a mixture of fibers such as hemp and aramid as per instant claims 3 and 18 (see column 3, line 43-column 4, line 18). The mixture of aramid and vegetable fibrillated fibers and the amount of vegetable fibers in the mixture affects the processability of the mixture. However, the amount of vegetable fibers in the mixture is optimizable as per instant claims 4 and 5. Discovery of optimum values of a result effective variable involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have a mixture of fibrillated vegetable fibers and aramid fibers wherein the vegetable fibers are present in an amount of 10-50 weight percent in order to have fibers that are easily processed so that the fibers provide a structural reinforcement for the composite gasket as shown by Foster in column 2, lines 35-56.

12. Claims 1, 9-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908 in view of Kesevan et al., U.S. Patent Number 6,220,405. Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claim 1 (see column 1, lines 5-11 and column 3, lines 30-33). Additionally, the Galati reference does not specifically disclose the fibril fraction as per instant claim 1. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in

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the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The Galati reference does not disclose the use of an additive in the friction material as per instant claims 9-10 and 12. Kesavan teaches a friction material that comprises reinforcing fibers and solid lubricants such as tin sulfide (see column 3, lines 44-65). Also, Example 6 of the Kesavan reference discloses that the lubricant is present in an amount of 6 weight percent as per instant claims 10 and 12. The addition of tin sulfide to a friction lining affects the parking-brake friction. Therefore, it would have been obvious to one of ordinary skill in the art to add tin sulfide to the friction material in order to have a lining that is resistant to repeated brake application as shown by Kesavan in column 2, lines 7-19.

13. Claims 1, 6-8, 17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galati, U.S. Patent Number 4,811,908 in view of Kjelby et al., U.S. Patent Number 5,354,606.

Galati discloses reinforcing fibers such as flax fibers that have a high degree of fibrillation as per instant claims 1 and 17 (see column 1, lines 5-11 and column 3, lines 30-33). Additionally, the Galati reference does not specifically disclose the fibril fraction as per instant claims 1 and 17. However, this is an optimizable feature. The reference does provide for high branched or fibrillated fibers. Galati provides a clear direction as to what parameters are critical namely the

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degree of fibrillation and a suggestion as to how the diameter, increased degree of fibrillation and increased surface area for reinforcing properties in re O'Farrell 853 F.2d 894, 7 USPQ2d 1673 (Fed. Cir 1988). Although the prior art is silent to the language, "fibril fraction", one skilled in the art would recognize that an increase in the degree of fibrillation would by definition result in a high fibril fraction in re Rau, 177 USPQ 215 (CCPA 1958). The Galati reference discloses the high degree of fibrillation – the superiority and advantage of it. Therefore, it would have been obvious to one of ordinary skill in the art that the fibril fraction of the reinforcing fibers be greater than 3 area percent and less than 50 area percent in order to have fibers with a high degree of fibrillation and superior reinforcing properties. The Galati reference does not disclose the addition of shives in the mixture of fibers as per instant claims 6-8 and 19-20. Kjelby teaches flax fibers that comprise shives as per instant claim 6 (see Example 1). The shives provide a reinforcing effect. The amount of shives present in the mixture is an optimizable. Discovery of optimum values of result effective variable only involve routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Therefore, it would have been obvious to one of ordinary skill in the art to have shives added to the flax fibers in the amount less than 75 percent in order to have a fiber mixture that has good mechanical strength.

### ***Response to Arguments***

14. Applicant's arguments with respect to claims 1-13 and 17-20 have been considered but are moot in view of the new ground(s) of rejection. Applicant argues the finality of the previous office action. The office action was rendered final necessitated by applicant's amendment. Applicant discloses in his argument that the instant application has a high degree of fibrillation.



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The newly cited prior art teaches vegetable fibers with a high degree of fibrillation as does the instant application.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (571) 272-1526. The fax phone number for the Group is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
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